

Types of rigid transformations

1. Translation

$$(x, y) \rightarrow (x+h, y+k)$$

Example: Translate (5, 3) using components -7, 6. (This means that $h=-7$ and $k=6$)

$$(5, 3) \rightarrow (-2, 9)$$

$$(x, y) \rightarrow (x-7, y+6)$$

2. Rotations

90° Counterclockwise and 270° Clockwise $(x, y) \rightarrow (-y, x)$

180° CCW or 180° CW $(x, y) \rightarrow (-x, -y)$

270° CCW or 90° CW $(x, y) \rightarrow (y, -x)$

Reflections

Reflection across x-axis

$$(x, y) \rightarrow (x, -y)$$

Reflection across y-axis

$$(x, y) \rightarrow (-x, y)$$

Reflection across $y=x$ line }

$$(x, y) \rightarrow (y, x)$$

Reflection across $y=-x$ line

$$(x, y) \rightarrow (-y, -x)$$

